

**ILLINOIS ENVIRONMENTAL PROTECTION AGENCY**

**June 2005**

**Response to Pilsen Environmental Rights and Reform Organization (PERRO)  
Questions Regarding Operations at**

**H. Kramer and Company  
1345 West 21<sup>st</sup> Street  
Chicago, Illinois**

**Bureau of Air Site Identification No.: 031600AGL  
Bureau of Land Site Identification No.: 0316005427**

**1. Please briefly describe the production process at H. Kramer and identify the pollutants released at different points in the cycle, so that this information could be used to compare to other plants' processes.**

Please see the Chicago Department of Environment's (Chicago DOE) report, which provides a detailed description of H. Kramer's operations.

**2. Please list all chemicals/contaminants in the smoke/steam released by the plant.**

Illinois EPA investigations have indicated that steam from the facility is generated when water is used to cool the ingots. This steam is not considered a pollutant by the Illinois EPA although it may contain an insignificant amount of the ingots' metal which could cause a metallic odor to be associated with the steam.

The stacks for the furnaces are controlled by the baghouses and scrubber. The furnace stacks mainly emit particulate matter from the metal processing. The particulate matter will consist of the metals processed including copper, tin, zinc, lead, nickel and manganese. There are also contaminants released by burning natural gas to heat H. Kramer's furnaces, including nitrogen oxides, carbon monoxide, volatile organic material, and sulfur dioxide.

**3. Are these chemicals harmful to the environment?**

The Illinois EPA has found no evidence that the H. Kramer facility is creating air pollution levels that are harmful to the environment or public health. However, our analysis of soil samples taken on-site and nearby H. Kramer is not complete. Among other things, the analysis will look at whether air emissions from H. Kramer contribute to contaminated soils. If residents have an environmental complaint, they are encouraged to contact the Chicago DOE's complaint line, 312/744-7672, and the Illinois EPA's Des Plaines regional office, 847/294-4000.

**4. Do the emissions meet legal regulations? If what is being released is at a legal level, nonetheless, do emissions pose a significant threat to human health and air/soil quality?**

H. Kramer currently has a "Lifetime Operating Permit" from Illinois EPA, which means that the potential emissions from the facility are less than the major source levels. This lifetime permit does not require renewal or reapplication unless requested by the Agency. The permit establishes hourly and annual emissions limits for particulate matter, nitrogen oxides and carbon monoxide. Illinois EPA also enforces opacity standards (which measure the darkness of the emissions) to capture potential short-term, heavy releases of particulate matter emissions. High opacity levels can be an indicator that the facility is having excess emissions and/or that its pollution controls are not working properly.

The findings from the most recent inspection (5/2/2005) are under review. The Illinois

EPA has found no evidence that the H. Kramer facility is creating air pollution levels that are harmful to the environment or public health. The facility has experienced opacity violations at times in the past, which has resulted in enforcement actions and the improvement of their pollution control systems.

**5. We would like a complete list of past complaints against H. Kramer Company and the outcomes/results of those complaints.**

The Illinois EPA has received the following complaints since 1996.

<b>Year</b>	<b>Complaints received</b>	<b>Action taken</b>	<b>Outcome</b>
1996	4/18, 5/25	Inspected by IEPA	Malfunctions, USEPA NOV
1997	None		
1998	9/1	Referred to City DOE	No violation
1999	12/12	Referred to City and Inspected by IEPA	No violation
2000	None		
2001	None		
2002	5/16	Inspected by IEPA	No violation
2003	None		
2004	None		
2005	4/18	Inspected by IEPA	Under Evaluation

The Illinois EPA has also performed other inspections of H. Kramer during this time period and has inspected H. Kramer a total of nine times in the last 5 years.

The Chicago DOE and U.S. EPA have as a result of their inspections discovered violations and taken enforcement actions. See the Chicago DOE report for more information.

**6. What is the process for investigating a complaint?**

The Illinois EPA's field office in Des Plaines (covering Cook, DuPage, Will, Kankakee, Grundy, Kendall, Kane, McHenry and Lake counties) receives approximately 600 complaints annually relating to air pollution concerns. The following procedure describes the receipt, handling and action taken on the complaints received.

**1. How the field office receives the citizen complaints:**

- Direct phone call from the citizen.
- Direct written communication using Illinois EPA complaint forms.
- Direct written communication from the citizen without use of agency complaint form.
- Referral from other county or federal agency, i.e., USEPA, OSHA,

IDPH, etc.

- Referral from other Bureau's within the Illinois EPA.
- Referral from township, city, municipality, county or state elected officials.
- Referral from emergency response team.

**2. How the complaints are tracked:**

- All the complaints received in the Region 1 field office are logged in a central system and are assigned an individual number.
- Upon logging the complaint it is distributed as follows:
  - a. One copy is filed in the central logbook,
  - b. Two copies are given to supervisor for assignment and necessary action,
  - c. Supervisor retains one copy for tracking and gives the other copy to assigned engineer for necessary action.

**3. What actions are taken:**

- All complaints received in counties outside of Cook County are investigated by an Illinois EPA inspector.
- All complaints in Cook County are referred to either the Cook County Department of Environmental Quality or the Chicago DOE for necessary action. Illinois EPA has contract agreements with these agencies. A referral is not made if the complaint is against a source that is already under investigation by the Illinois EPA for previous problems or if the complaint otherwise requires Illinois EPA action.
- All complaints that are investigated by the field office are followed up with a written report that includes recommendations for further action as necessary.
- The majority of complaints received by the field office are resolved during the initial investigation, and those that are not resolved are recommended for further action through the Illinois EPA's enforcement process.

**7. Where does H. Kramer Co. stand in the context of all companies that cause pollution in Chicago and in the rest of the nation—are the health and environmental risks it poses average or above/below average? What are the lead emissions of a similar company (anywhere in the U.S.) to Kramer that has the same smelting process?**

The Illinois EPA has three categories of emissions sources in the Chicago area:

Type of source	Definition	Type of permit
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Major	A source that: <ul style="list-style-type: none"> <li>• potentially emits more than 100 tons of a single criteria<sup>1</sup> pollutant,</li> <li>• potentially emits more than 10 tons per year of a single Hazardous Air Pollutant or 25 tons per year of all Hazardous Air Pollutants<sup>2</sup>, or</li> <li>• certain designated industrial categories.</li> </ul>	Clean Air Act Permit Program Permit (CAAPP)
Synthetic Minor	A potentially major source that chooses to take federally enforceable limits in its permit to limit actual emissions to below the major sources levels (see Major above). Such limits include restrictions on fuel use, operating hours or throughput limits.	Federally Enforceable State Operating Permit (FESOP)
Minor	A source that does not have the potential to emit more than the major source levels.	Lifetime Operating Permit

<sup>1</sup> Criteria pollutants include carbon monoxide, lead, sulfur dioxide, nitrogen oxides, ozone, and particulate matter.

<sup>2</sup> Lead is regulated as both a criteria pollutant and a Hazardous Air Pollutant and as such the major source limit for lead is 10 tons per year.

H. Kramer currently has a “Lifetime Operating Permit” from Illinois EPA, which means that the potential emissions from the facility are less than the major source levels. Lead emissions are calculated as a percentage of particulate matter emissions based on testing of the baghouse dust. This lifetime permit does not require renewal or reapplication unless requested by the Agency. There are approximately 5,400 minor small sources of air pollution, like H. Kramer, in Illinois. There are 730 “major” sources of air emissions in the state and approximately 600 potentially major sources (called “synthetic minors”). The largest 250 sources in the state emit 90% of the point source air emissions in the state.

In regards to lead emissions, according to their 2003 Annual Emissions Report (AER), H. Kramer is the 5<sup>th</sup> largest source of lead emissions in the state. H. Kramer’s 2004 AER shows that lead emissions from the facility have dropped by more than 60% from the 2003 levels. This is because less lead is being used in the products that H. Kramer processes, such as radiators. There are relatively few significant point sources of lead emissions in Illinois, in part because some have shut down; others have reduced their emissions.

There is another secondary brass and bronze smelter in Chicago, Sipi Metals Corporation, at 1720 N. Elston Avenue. Sipi Metals also uses baghouses to control its furnace emissions. Sipi Metals’ processes approximately half the volume of scrap that H. Kramer processes, and it calculates lead emissions in the same manner that H. Kramer does (as a

percentage of particulate matter emissions based on baghouse dust testing.) Therefore, Sipi Metals' reported lead emissions have been lower than H. Kramer's. As a percentage of reported particulate matter emissions, lead emissions are approximately the same for both facilities. The USEPA may be able to provide information on similar smelters in other parts of the country.

**8. Is the EPA following the Environmental Justice mandate with the H. Kramer Co.?**

The Illinois EPA is committed to protecting the health of the citizens of Illinois and its environment and to promoting environmental equity in the administration of its programs to the extent it may do so legally and practicably. The Illinois EPA supports the objectives of achieving environmental equity for all of the citizens of Illinois.

The Illinois EPA defines the term "environmental justice " as follows:

“Environmental Justice” is based on the principal that all people should be protected from environmental pollution and has the right to a clean and healthy environment. Environmental Justice (EJ) is the protection of the health of the people of Illinois and its environment, equity in the administration of the State's environmental programs, and the provision of adequate opportunities for meaningful involvement of all people with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

The Illinois EPA has a draft EJ policy. Key goals of this policy are as follows:

- To ensure that communities are not disproportionately impacted by degradation of the environment or receive a less than equitable share of environmental protection and benefits;
- To strengthen the public's involvement in environmental decision-making; including permitting and regulation, and where practicable, enforcement matters;
- To ensure that Agency personnel use a common approach to addressing EJ issues; and
- To ensure that the Illinois EPA continues to refine its environmental justice strategy to ensure that it continues to protect the health of the citizens of Illinois and its environment, promotes environmental equity in the administration of its programs, and is responsive to the communities it serves.

As described in Question 23 below, the Illinois EPA has been following the EJ mandate in its response to citizen concerns about H. Kramer.

**9. Who issues permits for H. Kramer and how are they issued?**

The Illinois EPA's Bureau of Air has issued a Lifetime Operating Permit for air emissions from the facility. The company is not currently required to have any other permits from the Illinois EPA.

To obtain a permit from the Illinois EPA Bureau of Air, the company submits a permit application, which describes the emission units, a list of the type and amounts of the air emissions that will be emitted, and a description of the emission control

equipment to be utilized. The Illinois EPA staff review the application and uses the information contained in it to determine if emissions comply with standards adopted by the Illinois Pollution Control Board and the USEPA. An engineer then drafts a permit detailing the equipment, the emission limits and other conditions that would apply to the facility.

When a facility constructs a new emission unit or makes modifications to existing emission units, it must apply for a new construction permit. Operating permits for larger sources are granted for periods of up to five years, after which they must be renewed. Smaller facilities such as H. Kramer may be issued Lifetime Operating Permits that do not need to be renewed or modified except when there are changes to the facility. In the case of Lifetime Operating Permits, there is no public notification requirement.

**10. What company performs the testing for the Toxic Release Inventories (TRI) for H. Kramer Co. and how do they conduct the testing?**

TRI data is not the result of annual stack testing. In H. Kramer's case, particulate matter emissions are estimated based on the testing of the baghouse contents. Then, lead and other metal emissions are calculated as a percentage of the particulate matter emissions. These calculations are based on USEPA emission factors. H. Kramer reports the TRI results to USEPA. The methodology used to estimate lead emissions from H. Kramer is conservative, which means it would tend to overestimate the amount of lead emitted.

**11. Does the Illinois EPA verify the reported results for the TRI?**

No. The TRI is run by USEPA.

**12. Does the company need permission to increase its production volume?**

The company would need to obtain a construction permit and revise its operating permit from the Illinois EPA if they wanted to increase production volume above the current permitted limits.

**13. Are environmental impacts taken into account before they increase their production volume?**

To increase emissions above currently permitted levels, the company would need to apply for a construction permit from the Illinois EPA's Bureau of Air. In applying for the construction permit, the facility would need to indicate the anticipated emissions increase. If that increase were to exceed the major source threshold, the facility would need to perform ambient air modeling to determine the impact of the increase on surrounding air quality. However, the facility would have to increase its production several times over to result in an increase in emissions that would exceed the major source threshold for construction permitting. This is unlikely to occur.

**14. Does the community have the right to challenge the permit? If so, how is this done?**

Unlike permits for major sources, there is no formal process for challenging Lifetime Operating Permits. However, the Agency willing to consider any comments on the permit.

**15. What are the formulas used to regulate the lead level and other chemical emissions released by H. Kramer Co.? (Ex: pounds, tons, etc.)**

In reporting emissions for TRI and for Illinois' Annual Emission Report, H. Kramer uses USEPA's AP-42 emission factors to determine particulate matter emissions. Lead emissions are calculated as a percentage of the particulate matter.

**16. Does the EPA prioritize the major polluters like Kramer for more thorough inspections?**

There are approximately 5,400 "minor" sources of air pollution, like H. Kramer, in the state of Illinois that must obtain a state enforceable Lifetime Operating Permit. With so many sources of air emissions, the Illinois EPA does not have the resources to inspect these facilities on a regular basis but instead inspects them based on a specific concern, such as complaints, or if the Illinois EPA suspects that an industrial group has a common problem.

Based on an agreement with USEPA, the Illinois EPA focuses its planned inspection schedule on the largest sources of air emissions in the state. There are 730 "major" sources of air emissions in the state and approximately 600 "synthetic minor sources." (See Question 7 for an explanation of these source categories, which are established by regulation.) Of these, the largest 250 sources in the state emit 90% of the point source air emissions in the state. Therefore it is necessary that the Illinois EPA focus its planned inspections on the major sources of air emissions. Nevertheless, the Illinois EPA has inspected H. Kramer 21 times since 1989, including three joint inspections with the Chicago DOE and USEPA. These inspections are mainly a result of complaints to Illinois EPA and referrals from the Chicago DOE.

For sources in the City of Chicago and other parts of Cook County, the Illinois EPA has agreements with the Chicago DOE and Cook County Department of Environmental Control. These agreements establish that the local departments are the first to respond to concerns and complaints associated with these smaller sources. Illinois EPA also participates when needed.

**17. What does the Illinois EPA specifically inspect in their routine annual inspections?**

H. Kramer is not a major source of air emissions and therefore is not scheduled to be

annually inspected by the Illinois EPA. Even major sources are only recommended by USEPA to be inspected once every three years. Smaller sources of emissions, like H. Kramer, are inspected on a concern basis – such as when the Illinois EPA receives a complaint.

Inspections related to complaints are conducted unannounced. Prior to an inspection, the field engineer performs a record review. This includes a review of the permit and the reports that the source is required to submit to the Illinois EPA. During an inspection, the field engineer checks for compliance with applicable regulations, permit special conditions and permit emission limits. The inspector observes the source's process operations, emission units and air pollution control systems. All the emission points identified in the permit are observed in operation as far as possible and maintenance logs, production data and the emission calculation data are reviewed. The facility's operations are checked against permitted limitations and requirements.

The Illinois EPA inspector also checks to see if there were malfunctions and if so were they addressed properly and in a timely manner. They observe the baghouse and scrubbers (air pollution controls) for visible emissions at the exhaust and also observe to see if the capture system controls, monitors and gauges are operating properly and if the hoods and ductwork are in good repair.

**18. What pollution control equipment does H. Kramer Co. currently use and is the equipment state-of-the-art?**

As described in the DOE answer to this question, H. Kramer uses baghouses and a venturi scrubber with a mist eliminator for control of fine particulate matter emissions, which are the primary emissions from H. Kramer. This equipment is appropriate for this type of facility. H. Kramer also has emissions of nitrogen oxides and carbon monoxide resulting from the combustion of natural gas.

**19. What is the process by which lead emissions are generated at H. Kramer Co.?**

A certain percentage of lead is used in brass and bronze smelting to add malleability to the final product. During the scrap melting process, some of the metal melted is vaporized, which results in particulate matter emissions. A percentage of these emissions contain lead. H. Kramer employs hoods to capture particulate matter emissions from the melting process. These hoods vent to the baghouses. Other emissions from the plant are controlled by the venturi scrubber and mist eliminator.

**20. What amount of lead is allowed to be emitted into the air?**

Neither state nor federal regulations limit the amount of lead emitted from secondary brass and bronze smelters, as these are not large sources of lead emissions. The Lifetime Operating Permit does not limit the amount of lead emissions from the facility. For purposes of reporting, such as TRI, lead emissions from such facilities are determined as

a percentage of the particulate matter emitted from the facility. Major sources or potentially major sources of lead emissions (over 10 tons per year) are required to have a permit that regulates lead emissions.

**21. What recommendations can you make to improve any threats to health and environment caused by the emissions at H. Kramer Co.? Is there technology available that can be employed to allow the plant to continue operating without producing harmful emissions? Are there any indirect methods that could also be employed, for example, planting trees to absorb any toxicity?**

Our analysis of soil samples taken on-site and nearby H. Kramer is not complete. Depending on the results, the State may offer recommendations for limiting exposure to lead-contaminated soils. We will look at H. Kramer's maximum potential impact for lead emissions and will evaluate this potential impact in light of air quality standards. The Illinois EPA has found no evidence that the H. Kramer facility is creating air pollution levels that are harmful to the environment or public health.

A discussion of other technologies would be quite lengthy. We would be happy to arrange a meeting with the appropriate agency staff to discuss this topic.

**22. Does the city, state, or federal EPA have the responsibility to reduce the allowable emission standards if it is found that the releases have negative health and environmental effects to the surrounding community?**

USEPA has established health-based National Ambient Air Quality Standards for the criteria pollutants. The standards are designed to be protective of human health and the environment. The Illinois EPA and U.S. EPA are responsible for assuring that these standards are met. To do this, federal and state regulations are adopted to limit emissions. Chicago and the surrounding areas meet the standard for lead, but exceed the standards for fine particulate matter and ozone. As a result, new strategies have been and will be adopted to further reduce fine particulate matter and ozone air pollution levels. Some of these strategies may indirectly limit lead emissions.

**23. The Clinton administration put into effect the Environmental Justice Initiative to protect people regardless of race or income from unfair negative environmental impacts. Does the state, city or federal EPA follow this initiative in Pilsen?**

Illinois EPA's Environmental Justice (EJ) policy covers all citizens with a focus on minority and/or low-income communities. EJ is based on the principle that all people should be protected from environmental pollution and have the right to a clean and healthy environment. EJ is the protection of the health of the people of Illinois and its environment, equity in the administration of the State's environmental programs, and the provision of adequate opportunities for meaningful involvement of all people with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

The Agency held a number of internal meetings and conference calls to discuss the soil sampling results that were provided by PERRO. On the evening of Thursday, May 5, the Agency traveled to the Pilsen Neighborhood to meet with PERRO to discuss the issues and determine the best steps to be taken. The Agency agreed to conduct residential sampling in the Pilsen Neighborhood as well as onsite sampling of the H. Kramer property.

On Monday, Tuesday and Wednesday, June 13, 14 and 15, respectively, the Agency conducted the residential soil sampling. PERRO worked with the Agency to obtain access agreements to residential properties. The Agency and the Illinois Department of Public Health will review the results and compile a final report with recommendations.

The Agency invited PERRO to participate in an EJ and Brownfields discussion in Peoria on Tuesday, June 14. PERRO has also been invited to participate on the Illinois EJ Advisory Group. This advisory group will be asked to provide: 1) recommendations on completing the draft EJ policy; 2) comments on draft permits for which EJ concerns are raised; and 3) recommendations for improving the environment in EJ areas.

The Agency's EJ Officer will continue to work with PERRO and the Pilsen Neighborhood to address environmental concerns and issues.

**24. Because Kramer Co. is under investigation, can and will the city, state, or federal EPA monitor the company more closely regarding the emissions they claim to release? As things stand the Kramer Co. self-regulates unless someone captures the pollution on tape or picture or makes a complaint. Could a temporary 24-hour camera and field ambient testing in and outside the plant be instituted?**

As described above, the Illinois EPA, USEPA and City of Chicago have inspected the facility numerous times individually and in coordinated inspections. The findings from the most recent inspection are under review.

Based on data provided to the Illinois EPA by PERRO, the Illinois EPA has also performed soil sampling at H. Kramer and the surrounding neighborhood to determine if there are elevated lead levels in the soil. Since lead does not break down (biodegrade), a number of sources may have contributed to lead in the soil near H. Kramer over the years, including: H. Kramer; other historic industrial activities in the area; leaded gasoline; potentially the former use of lead contaminated fill in alleys and boulevards; and other previous uses of products with lead in them (e.g., lead paint). The Illinois EPA would have to do more investigation to determine responsible parties if elevated lead levels are found in the soil.